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THE GENESEE FARMER.

SATURDAY, JULY 20, 1839.

WINTER IN IOWA.

We find in the Western Christian Advocate daily observations on the weather, temperature, &c. of the three winter months, from which we have condensed the following abstract. The observations were made at the Executive Office, at Burlington, Iowa Territory.

	Mean Tem.	Lowest Tem.	Highest Tem.	Range.	Clear Days.	Cloudy Days.	Variable	Snow in Depth.
December, 1838,.....	23	4	48	52	21	4	6	2
January, 1839,.....	31	0	60	60	8	20	3	3
February, ".....	31	9	54	63	15	5	8	0

By a reference to the tables published in the Farmer, it will be seen that the mean temperature in this place (Onondaga Co.) for the three months, was 22°, 25° and 32°. The mercury was also as low at Burlington, as in Western New-York. The most striking difference is to be found in the quantity of snow that fell during the three months. While it did not at any time exceed three inches at Iowa, there was about the same number of feet here. Judging from the remarks that accompanied the tables, the quantity of snow must, during the winter, have been many times greater here than there. The Mississippi froze over on the 5th of December and broke up on the 20th of February.

Knowledge for the People.

We earnestly invite the attention of parents, guardians, and all concerned in the education of youth, and particularly of all farmers, to the papers on the "Education of Farmers," from the pen of Mr. Holbrook, now publishing in the Genesee Farmer. The high reputation of Mr. Holbrook, the talent he has brought to the discussion of the matter, his extensive acquaintance with the various theories of education, and his intimate knowledge of the subjects of which he treats, all contribute to render them particularly instructive and interesting. We are glad to perceive they are already extensively copied, and we think few papers could render a more substantial service to their readers than by giving a place to those papers in their columns.

It appears very clear to us, that if the great cause of education is to keep pace with the wants of the country, and the state of society, there must be a reform, eminently radical, in the matter. We think that the usual routine passed through by the child in learning to read may be materially abridged, or rather, that a great amount of knowledge of the most valuable kind may be acquired, while this acquisition of letters and words is progressing. Children begin the study of the volume of nature before they open printed ones, and the remark of Brougham was most just, that take from a child all they learn before they are three years old, and they would be thrown back a distance which a long life could never recover. Birds, flowers and insects, are their first studies; and those in which they most delight; and if this innate pleasure in the natural sciences, if we may so call it, was taken advantage of in the way pointed out by Mr. Holbrook, and which nature herself dictates, there would be a vast amount of really useful knowledge acquired, and the common studies of the child not retarded, but most materially aided by the process.

Every one who is conversant with children, knows with what delight a flower, a butterfly, or a pebble inspires them; with what avidity they always enter, when permitted or encouraged, upon their collection; with what attention they will listen to well managed stories or illustrations of their history and nature; and how tenaciously they will store up in their minds for future use, the names and the facts so communicated. In this case learning ceases to be a burden; the acquisition of knowledge is converted into a pastime; and we do not hear the child complaining of "sitting all day on a bench and saying A B." Show a child a page of the volume of nature, and what inquisitiveness is at once awakened; question is piled on question; and the accumulation of ideas that go to constitute the wealth of mind, is in rapid, but unheeded progress. We wish to see the plan of teaching from nature adopted in our primary schools. We wish to see children gathering plants, and flowers, and pebbles, and shells, and insects, making the desk of the school house a cabinet of natural history, and converting learning into a recreation, instead of having it, as is now too often the case, one of the greatest of bugbears to the young mind. It is true, such a course would compel our teachers, many of them, to abandon the old routine, to make new acquisitions of knowledge for themselves; to forego the idea, that because they can manage Webster, Daboll, and Kirkham or Murray, that they have all the qualifications required at this time of the world, for teaching; and this effect is precisely what is wanted as the commencement of a reform; the beginning of a proper education for the people.

We do not object to a proper attention to the languages, particularly to the Latin, as that constitutes a kind of common ground, on which men of science from every country meet to interchange ideas, and advance the great objects of knowledge; but we do object to the mistaken notion, that an acquaintance with the languages is the Alpha and Omega of human acquisition, and constitutes the kind of knowledge most necessary or profitable. We believe the position of Mr. Holbrook can be sustained, that there is more *true, useful, practical* knowledge among the farming community in this country, than among any other of its classes; and that nothing is wanting but a persevering, energetic occupation of the ground already gained, and an improvement of the advantages within our reach, to secure to the farmer the high standing to which a cultivated intellect, and habits of industry, entitle the profession. No man is more favorably situated for observation, study, reflection and an acquaintance with nature, than the farmer. The blue sky, the green earth, the phenomena of the atmosphere, clouds, winds and storms, the grand elements of chemistry, mineralogy and geology, are continually before him, and deeply indeed must he be to blame, who, with such opportunities before him, neglects to improve his mind, or advance in the path of useful knowledge.

SUMMER FALLOWING.

There is no method of preparing lands for wheat so proper on every account as summer fallowing. Where land is very clean, and it is desirable from motives of economy, or for the application of manures, wheat may follow a green crop, roots or corn; or if in clover, feeding it through the summer, and simply turning it over, rolling and harrowing in the seed, may be admissible where the soil is clean, and of a kind that will allow the tillering of the plant, without further pulverization. But there is but a small part of our lands that can be considered of this class, and there are other reasons which in many cases render fallows indispensable. The first of these is the necessity, in most cases, of giving a greater depth of friable soil. All land on which it is expected to raise good crops, should be readily permeable to the roots of the plants to the depth of twelve or fifteen inches. As lands are generally ploughed, the soil is rarely stirred to a greater depth than about six inches, and this, year after year. Can it be wondered at, that such lands become exhausted. Ploughing in fallow, when the surface is made light, enables the farmer at each ploughing to go deeper, and thus he increases what is of so much consequence, the depth of his friable soil. Wheat, or indeed any crop, requires soil to be fine. In soils well pulverized, the seed is more equally distributed, is much better covered, will shoot more readily and uniformly, and the young roots find less difficulty in penetrating the earth at starting. Yet soils can only be made fine by much working, by repeated ploughing and harrowing, such as a well conducted summer fallow gives. Besides, the finer the soil is made, the greater and more perfect is the æration or exposure to the action of the atmospheric air; a process essential to the development of the qualities of the soil, and the rapid nutrition of plants. Another and very important end in summer fallowing, is the tendency it has, if thoroughly performed, to free our wheat fields from noxious weeds. Weeds spread very slowly in pastures; it is only where land is ploughed that the thistle, charlock, Johnswort, &c. make much progress.

Wherever these plants exist, a little ploughing is a dangerous thing, as it only fits the earth for their vegetation, and assists in spreading the seeds and the roots, without destroying any. Repeated ploughings, however, produce a different effect. The seed in the soil turned under vegetates, and is destroyed by the subsequent ploughings; the roots torn up and exposed, perish; and those not lifted out, deprived of their tops, or in other words, of the power of breathing, (for all plants breathe through their leaves,) will, in course of the season, share the same fate. On lands infested with that truly formidable pest, the Canada thistle, experience shows that this is the only course that can be pursued with advantage, or with any rational hope of lessening the injury to the wheat crop. The principal objection to summer fallowing, is the additional labor it compels us to perform, and the difficulty of applying manures properly, especially long, or unfermented barn-yard manure. As to the first, the farmer is not a man to expect any substantial good without labor, and where there is a rational prospect of success, is always prepared to exert and use it; and as to manures, let the farmer when he draws out his manure to the field, if it is desirable to apply it to the wheat crop, pile it in the most convenient places, interspersing layers of turf, marl, swamp or common earth, with a covering of one of these to retain the escaping gases during fermentation, and he will find when he comes to spread the manure previous to putting in the seed, that he has not only greatly increased the quantity, and if properly prepared, the quality of his manures, but that it is in a much better condition for immediate effect on the wheat plant, than if applied in an unfermented or undecomposed state. New, or unfermented manures, are not good for the small grains, as they tend to force a great growth of straw, cause it to lodge, and too often an inferior berry is the result. Fresh manures should be given to corn or roots; wheat requires it should be decomposed and made fine, to produce the greatest effect. Long manure and summer fallowing are incompatible with each other, and unless the soil is sufficiently rich from the previous management, it is necessary that it should undergo some preparation to be useful; and this perhaps would be best for *wheat*, whether one or more ploughings are given. Summer fallowing is perfectly consistent with a clover course, such as our farmers have found most essential to success, and which, with proper care, will doubtless continue soils in exuberant fertility.

DICTIONARY
OF
TERMS USED IN AGRICULTURE,
AND IN THE SCIENCES MOST INTIMATELY CONNECTED WITH ITS ADVANCEMENT.

[Continued from page 163.]

CABBAGE. (*Brassica oleracea.*) This well known plant is extensively cultivated in most gardens for culinary purposes; and in some places is grown largely in the field for feeding to animals. The cabbage formed a prominent article in the plan of Cobbett, by which one-fourth acre of land was to support a cow the year round. In climates that are suitable, the plant called the tree cabbage will furnish a great amount of food, and is profitably cultivated for animals. The common cabbage requires a rich soil, and will thrive the best in loam. It should be planted from four to six feet apart, according to the kind; some varieties being much larger than others. Cabbages should be planted as early as the ground can be fitted for their reception, and those designed for summer use, should be started in hot beds, where this convenience is at hand. In the preservation of cabbages for use in winter, they are generally put in cellars, but they are very apt to mould and rot; and if the temperature is not very low, the heads will crack open, and the new shoots put forth before the season for transplanting arrives, thus destroying the head. Burying in the ground where the earth is dry, the covering of earth comparatively slight, is probably one of the best methods of preserving them fresh and in good order. The cabbage will bear a considerable degree of cold without injury, if situated so that the frost is taken out gradually by the earth. Large quantities are annually made into sour krout, an article which forms an important part of all ship stores destined for long voyages, and to the use of which, much of the exemption of sailors from that terrible disease the scurvy, is now to be attributed. There are many varieties of this plant; but the general properties are the same.

CALCIUM. This is the name of a metal discovered by Sir H. Davy, and constitutes the basis of lime. It is of a silver color, burns with great brilliance when brought in contact with atmospheric air, and absorbs oxygen so rapidly, that it instantly assumes the form of lime.—The term *calcareous*, as applied to earths containing lime, is derived from this word; and in the form of carbonate of lime, or common limestone, there is perhaps no substance more universally diffused, or which acts a more important part in the economy of vegetation.

CALORIC. This is the name given to that agent which produces heat and combustion, and exercises a great influence on the principal phenomena of nature. It is imponderable, and appears to exist in two states, *free* or uncombined, and *latent* or combined. Perhaps there is nothing that has a more decided influence in nature than caloric. Under God, it seems to be the supporter of all vegetable and animal life; and it appears certain, that a state of absolute cold would be a state of absolute death. The opinions of learned men at the present time seem tending to the belief, that caloric, electricity, galvanism, magnetism and light, are effects of one and the same agent, depending for the different appearances and effects on its accumulation, rest or motion. On agriculture, this agent acts with great effect, since the soil is cold or hot according as it retains or parts with the caloric it receives from the sun. Soils that are black or white receive the least benefit from heat; the black mold, while it acquires heat with great rapidity, giving it off still more freely; and the white soils, owing their color principally to clay that retains moisture very strongly, scarcely feel its influence, the heat being carried off in evaporating the water. The experiments of Rumford and Leslie show, that a vessel covered with lamp black radiated heat at the rate of 100°, while one made of bright tin plate gave out only 12°. Soils in which mold or black earth is properly combined with silex and alumine, will retain heat the longest, as the black gives it out to the others instead of radiating it into space. A melon laid on a bed of powdered charcoal will ripen, when one on common earth will remain green and immature.

CALVES. The young of the cow, *bos* of Lin. The value of the future ox or cow is greatly depending on the treatment the calf receives; and hence much attention has been paid to the rearing of the young animal, in districts where the breeding of cattle forms an important object to the farmer. Where circumstances will permit, allowing the calf to run with the cow and draw his food directly from her, is probably the best method, since it is that of nature; but as the milk for dairy purposes is valuable, breeders have substituted many modes of feeding the calf, in which milk is partly dispensed with, some other nutritive substance taking its place. As a general rule, the calf should be allowed to suck the cow till the milk is good. Some allow them to suck a week or fortnight, according to their strength; but we have found that where calves were to be taken off, the earlier it was done, the better for both cow and calf it was, both making less ado at the separation. According to Marshall, a celebrated English breeder, the best method after the calf is taken from the cow is this.—"new milk in the pail a few meals; next, new milk and skim milk mixed, a few meals more; then, skim milk alone, or porridge made of milk, water, oatmeal, and sometimes oil cake, till cheese making commences; after which, whey porridge, or sweet whey in the field." When fed from the pail, calves require about two gallons daily; but care must be taken not to give it them too cold, as it will cause the calf to purge. When this is the case, one or two spoonfuls of rennet in the milk will be a good remedy. Great regularity should be used in feeding calves; and they should always have sweet grass, or good clover hay to nibble upon in the intervals of feeding with milk. Calves should always be housed in the winter, have good hay, water and occasionally salt. They are easily taught to eat carrots or turneps, and we never knew a lot of calves that had each a good 'nubbin' of corn daily from the hand of the master, and plenty of good hay, that did not go through the first winter well.

CAMBIUM. When the sap from the roots of trees has ascended to the branches, and undergone that peculiar elaboration which fits it for the formation of the various parts of the plant, fruit, wood, bark, &c., it descends towards the roots, depositing in its progress the materials destined to the several parts. Of these, the principal is the substance of the future alburnum and liber. These materials are first deposited in the form of a layer of glutinous or gummy substance, termed the *Cambium;* which appears to consist of the solid portion of the sap, deprived of the greater part of the water. This becomes more and more consolidated, and becomes an integrant part of the plant, constituting two layers; the first, the outer circle of wood, called the alburnum; and the other, the inner layer of the bark, being the liber.

CARBON. The base of coal. It is found pure only in the diamond. Though this fact was suspected by Newton, it was not established till Lavoiser effected the combustion of the diamond enclosed in iron. As the diamond disappeared, and the iron was converted into steel, (a well known result of the combination of carbon and iron,) the inference was clear that the precious stone was pure carbon, and farther experiments have demonstrated its truth. Carbon forms the base of all wood, and consequently of all trees and plants; and is, therefore, one of the most important principles in nature. Plants, however, never take up the minutest quantity of carbon while in that state, however fine it may be reduced. By a wise provision of Providence, an inexhaustible reservoir of carbonic gas (carbon converted into air) is found in the atmosphere, which readily combines with water, and in that state is taken up by the roots for the support of the plant. The leaves of trees also perform a species of respiration by which carbonic gas is taken into the plant during one-half of the day, to be decomposed by the solar rays, and while the carbon is retained, the oxygen is set free and thrown off by the plant to renovate and purify the air. *Carbonic gas* is composed of 27.4 parts of carbon, and 72.6 parts of oxygen. Carbonic gas is fatal to animal life, and to this gas, the deleterious effects of the Grotto del Cano, the Valley of the Upas, the craters of volcanoes in some cases, what is called the choke damp in mines and wells, &c. are owing. No part of a plant has the power of decomposing this gas, except those that are green; hence plants prematurely stripped of their leaves, are at once deprived of their greatest means of procuring carbon, and must suffer accordingly.

CARROT. (*Daucus carota.*) Few plants exhibit the improving effects of cultivation more strongly than the carrot. In its native state, it is small, dry, fibrous, white and strong flavored; as cultivated, it becomes large, succulent, and rich in color, and nutritive properties. Carrots contain about ten per cent of nutritive matter, of which nine is sugar and the remainder starch. Many attempts have been made to make sugar from carrots, but they have failed; while by distillation large quantities of spirits are produced. Twenty tons have yielded 240 gallons. Carrots require a rich *deep* soil, and on any others their growth should not be attempted. They succeed best in rows, 18 inches apart, and eight inches in the rows. In a shallow soil, or one rich only on the surface, the roots will be scragged, and of an inferior quality. Five hundred bushels may be considered the average yield per acre on a good soil, though instances have occurred of yields of eleven or twelve hundred bushels on that quantity of ground. Few roots are of equal value to the carrot for feeding animals. Almost all are fond of them, and their excellence cannot be disputed. They make the finest colored and best flavored butter or beef; horses thrive rapidly on them, and hogs can be fattened on them with ease. The carrot crop is not quite as certain a one as the potatoe or turnep crop, is rather more difficult in the choice of soils, and more care and labor in the production is required; but still it is one of great value, and where circumstances do not forbid, should always find a place among the roots grown, and rotation adopted by the farmer.

CART. Fifty years since, the use of the wagon for farming purposes was almost unknown. The reliance was on the cart and oxen, instead of the wagon and horses. As the latter increased, the former gave way; and now, the use of the cart is mostly confined to farms on which cattle alone are used, and to some particular sections of country. It is a question, however, which deserves serious consideration by farmers, whether more has not on the whole been lost, that has been gained by the change. On grain growing farms, where much ploughing is to be performed, horses are indispensable, and the wagon of course may well be preferred; but there are tens of thousands of small farmers in our country, that, we think, would greatly consult their convenience and profit, by discarding their wagon and its attendant span or two of lean horses, and substituting in their place, for labor, the old fashioned and less costly cart, and a yoke or two of clean built, light traveling Devons, or other good working cattle.

CATARRH. A disease of horses known under the names of influenza, cold, horse distemper, &c., and is one of the most common and disagreeable to which this useful animal is subject. It is not usually fatal, or long continued, unless the animal is injudiciously treated, improperly worked while under the influence of the disease, or dosed with injurious remedies. It makes it attack usually in the spring or fall, commencing with fever, followed by discharges of matter from the nose, swelling of the glands of the throat, difficulty of eating or drinking, and of course much emaciation and weakness. Bleeding is admissible only during the fever stage; setons in the glands, or blisters when much swelled; promoting discharges from the nose, and keeping the bowels open, have been found the most effectual methods of arresting the disease. The distemper is clearly contagious, and infected animals should be kept from those that are sound as far as practicable.

Horticultural Facts and Hints—No. 1.

The circle of fruits. The importance has been formerly suggested, of a complete circle or succession of fruits throughout the year; the practicability of such succession is however, by many, considered as scarcely real. A little examination will show that it is not of very difficult attainment, where *hardy* fruit only are employed.

The principal hardy fruits may be divided into three general classes, namely, 1. BERRIES; as, the *strawberry, currant, gooseberry, raspberry, cranberry, mulberry,* &c. 2. STONE FRUITS; as, the *cherry, apricot, plum, peach, nectarine,* &c. 3. POMES OR KERNEL FRUITS; as, the *apple, pear, quince, medlar,* &c. As a general rule, the fruits in the first class ripen before those in the second, and those in the second are in general earlier than those in the third, although some in the former follow a part in the latter. These three classes, with their varieties, form an entire circle of fruits, many of the segments of which, however, overlap each other. Thus, the earliest varieties of the strawberry, which may be considered as our earliest hardy fruit, ripens early in the sixth month (June,) and the different varieties extend the season of them through summer and autumn to winter. We have seen a dish of the red Alpine on the table on the first of winter, which grew in the open air with no protection. The earliest variety of the cherry commences ripening but a few days later than those of the strawberry, and the latest are gone before the end of summer. The earliest plums ripen but a few days before the early apples, and the apricot about the same time.

By means of the numerous varieties of the above mentioned fruits, ripe fruit may be had nearly during the following seasons:—*strawberries*, from the first of sixth month (June) till winter—the principal season however, extending about a month and a half from the first ripening. *Cherries*, from early in sixth month, till about two months later. *Raspberries*, from early in seventh month (July) till four or five weeks later.—*Plums*, the middle of seventh month till winter. *Apricots*, the middle of seventh month and for about a month afterwards. *Apples*, the middle of seventh month, till the same time the following year. *Pears*, from the same till the following spring. *Peaches*, from the latter part of seventh month until winter. These seasons of ripening apply to the western part of New York, in favorable seasons. It is to be observed that a selection of proper varieties is absolutely essential for securing ripened fruit at the times mentioned. Thus, there are but very few varieties of the apple that will keep well till the following summer. Again, to have peaches in the early part of winter, requires that the fruit of suitable varieties should be gathered before frosts for preservation within doors.

Turnep fly. We have found nothing more efficacious in preventing the ravages of this depredator than leaving the surface of the ground, after sowing, as smooth as possible. On clayey grounds, which consequently are more or less cloddy, we have observed, that those parts of the ground which are the most thickly covered with clods, invariably suffer most from the turnep fly; while, where the earth has been well pulverised and thus left with a smooth surface, the young plants have escaped. A smooth surface affords no hiding places for the insect, hence we find that on light soils, the surface of which is generally left much smoother than heavy soils, the turnep fly is less destructive than elswhere. Hence also, the expedient of *rolling* after sowing, for smoothing the surface, should never be neglected.

Young fruit trees, at the present season, which is becoming dry, should be carefully guarded against the effects of drouth. One of the most effectual means of doing this is to keep the earth entirely free from weeds for a few feet around them, and to stir the surface frequently with a hoe. For newly transplanted trees, this is very essential.

Duration of vitality in garden seeds. Some seeds will grow, with care, many years after ripening, or after the times designated in the following list, but the latest periods at which common seeds may be expected to grow *freely*, with good culture, are, according to the best authorities, the following:

Esculent roots. Carrot, one year; parsnep, one year; radish, salsify, scorzonera, two years; turnep, skirret, four years; beet, ten years.

Cabbage tribe. Four years.

Leguminous culinary vegetables, (beans, peas, &c.) One year.

Alliaceous plants, (onions, garlic, &c.) Two years.

Spinaceous plants. Patience dock, orache, one year; purslane, two years; spinach, four years; white beet, ten years.

Asparaginous, &c. Asparagus, four years; sea kale, artichoke, three years; cardoon, rampion, thistles, two years.

Plants used in tarts, &c. generally two years, but pie rhubarb only one year, and the pumpkin tribe ten years.

Herbaceous fruits. Cucumber and melon, ten years or upwards; egg plant, tomato, and capsicum tribe, two years.

Miscellaneous. Sweet herbs, generally two years; but rue and rosemary three years, and hyssop six years; lettuce, three years; endive, mustard, tarragon, borage, four years; dill and fennel, five years; parsley, burnet, chervil, six years; sorrel, seven years; celery, ten years.

Annual, biennial, and perennial flower seeds, are not generally kept by seedsmen longer than one year, though most will grow at two years, and a few at many years.

Tree seeds. Stones, two years, and some, as the thorn, three years,—their vitality depends in some degree on the manner in which they are kept; acorns, poplar, willow, only one year. J.

Seed on Rich or Poor Land.

There appears to be some diversity of opinion as to the point whether good or poor land requires the greatest quantity of seed, and the practice among farmers is probably as variable as their opinions. It is certainly desirable that the proper course should be pursued; a wrong one must of necessity subject the followers of it to losses. In order to arrive at a correct understanding of the matter, the manner in which plants grow on rich and on poor soil should first be considered. When a seed, say of wheat for example, is put into a rich soil, it springs up with a broad vigorous leaf and shoot, throws out strong roots, immediately begins to tiller or push out side shoots from the root, and if not checked or crowded will sometimes show from ten to twenty, and even more perfect stems, or heads, from a single plant. If the seeds are put in close together in such a soil, the plants will tiller, but the stems must rise close together, a want of circulation of air experienced, and though a great growth of straw is produced, the quantity and quality of the wheat is most generally of an inferior kind. Besides, as wheat stems when grown in such a crowded state, are liable to all the diseases and difficulties of plants grown in the shade, they are usually wanting in solidity and firmness, and frequently are lodged so early as to afford little or no grain.

When a seed is sown on land of a poor quality, the shoot and the root are less vigorous and do not exhibit the disposition to expand and tiller as in the former case; very frequently not more than one or two stalks is produced from a root, the stems are hard and little subject to the diseases incident to crowded wheat, and rarely lodges from rapidity of growth or weakness of stem. The same remarks are in general applicable to all other kinds of grain or plants, so far as the richness or poverty of the soil is concerned.

It would seem then to be perfectly reasonable to suppose that on rich land less seed should be used than on land more reduced, and the facts developed in cultivation it is believed correspond with this theory. We have seen instances in which the crops of grain and of roots, there was reason to think was much reduced by a rich soil being overseeded. The plants were vigorous but crowded; in grain immense growths of straw was produced, but the berry was light and imperfect; in the roots, the tops were most luxuriant, but the bulbs and tubers evidently suffered. In confirmation of the opinion here advanced, and in particular as we know it is contrary to the practice of some, perhaps many, of our farmers, who are in the habit of more heavily seeding good than poor land, we make the following extract from an able paper by an experienced farmer, in the May No. of the London Farmer's Magazine:—In treating of the potatoe, and the best method of producing great crops, the writer says:—

"The error is, in planting good land you put in twice as much seed as is required; the consequence is a great mass of haulm is produced, which by being so close together draws each other up; your land is covered with a mass of green that excludes the sun and air, and in dry summers sucks up all the moisture required for the tubers, and if any of these are formed there is nothing to bring them to perfection, and this is the true cause why in good rich land you do not obtain a crop; the fault therefore is not in the land, but in the management of such land. The very same error is committed in sowing wheat and other grain too thick."

We knew a small piece of rich made land sowed with barley at the rate of five or six bushels to the acre, and the crop was an entire failure. There can be no doubt that if properly distributed, a bushel of wheat will furnish as many plants as can grow on an acre of good land, and a bushel and a half is sufficient for any land fit to grow wheat. Corn will do to be planted very thick in the rows or drills if these rows are sufficiently distant from each other to allow a free circulation of air, and the access of the sunbeams; and the same remark holds true of most other plants. Thus wheat sown in drills rarely suffers from the causes that are so fatal at times to that sown broadcast, as the spaces between the drills allow the access of light and air to the stems of the plant, and aids the perfection of the grain. As a general rule then, we think it may be considered as settled, that good lands require less seed than poor ones, and vice versa.

FREE MARTINS.

When a cow has twin calves, one a bull calf and the other to appearance a heifer calf, the last is called a *free martin.* It is a singular law of nature, and apparently limited to cattle, that twin animals so produced, are unfit for the propagation of their species. The free martin is to appearance a cow, exhibits at times sexual inclinations, and some have been known to receive the male, but always without effect. These singular facts led Dr. Hunter to a physiological examination of their structure; and recently Dr. Allnatt, of London, has examined several with the same object. The cause of this singular animal phenomena, is found to result from a peculiar vaginal and auterine organization, which effectually prevents conception. The expulsion of the urine was, in the animal examined by Dr. A., propelled in jets rather than a continued stream, and a singular mal-conformation of the parts, on examination after death, satisfactorily explained the cause. Free martins work well in the yoke, are strong and kind workers together, or with another ox. When allowed to run with the cows, the free martin, unlike the spayed heifer, is particularly on the alert, when the cows are in a condition to receive the male. Why the female of the ox family, when produced as a twin, should alone of all other animals be incapable of reproduction, is one of those physiological anomalies left for future observers to explain.

Pumpkin Sugar.

It is stated on good authority that an important revolution is about occurring in France in regard to the manufacture of sugar; and that a large capitalist is about erecting an extensive establishment for the manufacture of sugar from pumpkins, experiments having shown conclusively that it may be obtained from this vegetable in abundance, and of a superior quality.

H. C.

COMMUNICATIONS.

BEES.

Mr. Tucker:—I procured me a hive of bees last spring, and a few days since they swarmed for the first time. It was a large fine swarm, was hived readily in a new hive, and went to work apparently good-natured and in earnest. The next day, however, they came out of the hive and went off into the woods. No one saw them until they were fairly under way, and it seemed uncertain whether they came from the new or the old hive, as they were standing close together, and no difference in the numbers or labors of either swarm could be discovered. The activity at the new hive continued till near night when it suddenly ceased, and at night, the hive was found empty of bees, a few small pieces of comb being left as the result of their labors. Now I should like to know from some of your subscribers who have had experience with the honey bee, whether the bees select their tree in the forest *before* swarming;—the best method of preparing the hive and hiving the swarm,—and whether a swarm, intent on leaving for the woods, can be prevented, and in what way. It appeared to me that the bees absent from the hive at the time the swarm left, were unacquainted with the movement; but on returning with the honey they had collected, immediately left for the new residence in the woods. This would account for the general activity about the hive until the absent bees had returned, and again departed in train of the decamped colony. If so there must have been a general knowledge respecting the new location; and to that point all directed their course, so soon as it was discovered the main body, with the soverign, had left. A Beginner.

Management of Mulberry Trees.

Mr. Tucker—Since I have subscribed to your valuable paper, I have been much interested in the cause of agriculture, and especially in raising the Mulberry for Silk, which I consider of great national importance; and, as this branch of agriculture is yet in its infancy, and practical information respecting its culture is valuable, I send you my experience, (thus far,) this season; although I have sustained a partial failure.

Having previously read that the Multicaulis would not withstand the winters in this latitude, and that the Broussa and Alpine Mulberry could be propagated with equal facility, I purchased, about the first of March last, 100 Alpine, and 2000 Broussa trees, said to be seedlings two years old. Having seen it repeatedly stated that a greater number of plants could be obtained from cuttings than in any other way, I intended to make them into cuttings, and put them out so as to occupy three acres of ground. After having previously buried them until the buds started, I cut into from one to four or five bud cuttings, all my Alpine, and about 1300 Broussa trees; some of which I put in furrows, some in ridges, with manure under them, and some in level ground. I then concluced I would let the other 700 Broussa trees to rest awhile. Meantime a young man who had been engaged in the business at the "East," informed me that he planted a quantity of Broussa cuttings last year, which sprouted and came up to the top of the ground, and then died without putting out a sign of root. He concluded by saying he would not give $10 for my whole crop. As I never had seen any statement in the Silk Grower, (which I take) or any other paper, that would corroborate his relation, I did not believe him, but supposed he either wished to discourage me, or else that the cause of his failure was in his ground, manner of cultivation, or that his trees were damaged at the outset. To be on the safe side, however, I trimmed the other 700 trees, which I had laid down in furrows with the roots attached, and covered them about three inches deep. Almost every bud of these came up in a short time, and they are now very thrifty, fast growing plants, whilst not one twentieth of the cuttings are alive. These latter came up well to the top of the ground just as the young man said, but putting out no roots, they immediately rotted. This is also precisely the case with several of my neighbors, who purchased Broussa trees, put them out in cuttings, and lost them. I am, however, well pleased with my layers. There appears to be no mistake in their coming up; requiring not more than one-fifth the ground, and one-half the expense to cultivate them, and withal growing twice as fast as even the cuttings of Multicaulis. I regret that this was not known before, as several hundred dollars worth of trees might have been saved here; besides its being such a drawback on the business. As a proof that the Broussa was generally thought to grow well from cuttings in this State, I will mention that A. J. Chew, Esq., of Columbus, who has probably done more for the Mulberry and Silk cause than any other man in this Staie, recommended and gave instructions to those who purchased Broussa trees of him, to propagate them by cuttings.

I am now engaged planting potatoes where my cuttings were, and must relate a curiosity, (to me at least,) respecting them. I bought two barrels, which were marked "Blue Ball," and were brought here from Cincinnatti. On opening them I found the eyes all covered with young tubers, from the size of a patridge's egg, down to a shot, and growing finely. Of these we gathered and ate a mess that had grown within three weeks, without ever being near the ground. The old potatoes were considerably wilted.

The grain crops in this neighborhood look promising.

Yours, &c. W. L. R.

Agricultural Papers.

Mr. Tucker:—How many there are in our country, who are in good circumstances in life, and have large families of children growing up ignorant of what is going on in our world respecting the pursuits of agriculture. Farmers who have large families of children ought to subscribe for some agricultural paper, which their progeny could peruse in their youthful days. This would be far better than to spend their money for something else, of no use to themselves or families. The money that farmers lay out in pay for papers, is laid out to a very good purpose, and a great deal of information can be obtained therefrom, if they are properly studied.

Some will remark that farming can be done, without the aid of papers; we will allow it can, but *how* will it be done? In no order at all; nor can any farmer, perform his various duties with propriety without some other resource to apply to, than his own ingenuity can invent. It is as much of a trade, to be a good, practical and economical farmer, in this enlightened day, as it is to be a good mechanic, of any kind.

I very often see those who profess to be very good judges respecting the different modes and regulations of farming who, when they attempt to carry into practice some of their modes of operation, show that they know nothing about farming and are as ignorant of it as any of the city or village gentlemen would be, who should go into the country and commence the pursuits of husbandry. Very often I see gentlemen come from the city and villages, for the express purpose of enquiring into the affairs of the farmer; and they find that he can live as well as themselves, and enjoy a great deal more happiness and tranquility in passing through life. If it were no trade to be a farmer, why could not those who have been brought up in our villages be farmers, as well as those who have spent their whole life-time in the pursuit? The fact is we have got to serve a good many years to become accomplished farmers, and learn the best time for doing all the various kinds of work, appertaining to domestic pursuits. I have spent my past life upon a farm, and I do not now know half as much about farming as I wish I did; neglecting to take agricultural papers, I have thus fallen behind the times.—But the time has now come that I can see the importance and usefulness of taking agricultural papers, knowing that they contain useful knowledge respecting domestic agricultural employments.

Education is of great importance to the farmer, as well as to the Lawyer and Divine. No farmer can prosper in his affairs, without an education, to see that his business is kept straight, and at the end of every year know how he stands with the world. The time is not distant when the farmers in our country will learn the best method of pursuing their affairs and will interest themselves an hundred fold, by so doing. I, for one wish no better vocation than farming; although it is a very hard and fatiguing life to follow. Still I think farmers are as good, and as much respected by community at large, as any other class of people in the world.

Yours, &c. W. S. T.

South Venice, June 29th, 1839.

Harvesting Corn in Ohio.

Mr. Tucker—As things that come from a distance, are generally esteemed more valuable than those produced at home, I shall venture to give our western method of cutting up corn, and let you manufacture it into what you like.

My plan is to put 120 hills in one shock, others put 144. I commence cutting two rows, advance ten hills, and then stop and tie four hills in the rows; I am cutting, in this manner, –|– Then advance, cutting both rows laying five or six hills in a parcel, until I have advanced ten hills ahead; then stop and tie as before, and this makes twelve hills to a shock this way. I then count off eight rows, and commence on two more; then I proceed through the field, or lot intended to be cut. I then put up what is cut up between those hills, having their tops united in as even a manner as I can; set it as nearly upright as possible, placing the buts well on the ground, and in such a manner as to form a neat circle. The corn by this time is generally partially cured, so that I take a stalk or wisp of straw and tie the tops at a suitable height and distance. It is best to let this stand a day or two, in order that it may properly cure. After going through in this order, I commence and cut 4 rows to each row of shocks, 2 rows on either side, letting it cure as much as possible, but be sure to have it well set up before rain falls upon it. I prefer letting it stand a day or two in this state, as I have seen it mould some, if the weather should be damp. Then proceed with the remaining four rows in like manner; when each shock shall have received its due portion of 120 hills, be particular to set it upright and even around the centre, and the buts well settled on the ground. Now after the shocks have stood a day or two, let two hands go carefully over the whole, righting every shock and stalk that may be out of place, and at the same time firmly tying each and every shock at a reasonable distance from the top with a band made of rye straw, or made by taking four stalks; take off the ears, let each man take two, roll the blades around the stalks from but to top, then let them unite these by crossing their tops and breaking back the tops of each pair towards the but, and inserting the tops between the stalks. Last year I put up about twelve acres in the above manner, a great part of which stood out until May, and better or sweeter corn I never had, than I now have; I think not more than two or three shocks fell so as to take damage.

Jefferson, Preble Co. Ohio, June 12, 1839. S. T.

Murrain.

Mr. Tucker—If you think the following worth publishing, you are at liberty to make what use of it you think proper.

Before moving from Herkimer County, N. Y. a little more than three years ago, to this State, I had heard much of the disease in cattle which prevailed in Ohio, called Murrain; and after arriving here and hearing of some deaths among cattle by this disease, I requested that my neighbors would inform me should any more cases occur; and it was not long before I was thus notified, and I found the animal, a fine cow, apparently in great distress, with an extended paunch, groaning at every breath—the eye sunken, and finally the whole symptons, so far as I was able to discover, so nearly

resembled what I had frequently seen in the State of New York; from their eating too much green clover, or from breaking into the corn field, and, as was said, eating too much corn, that I made mention of the similarity of symptoms. As I did not pretend to know any thing about the disease, the people made use of the common remedies, such as soap and milk, Sal. Epet. Nitre, Yeast, Gun Powder, &c., but all to no avail, as the cow died. Now as my rule has always been in determining what a disease was, not to take such symptons or effects as were sometimes present and sometimes not, but to take such and only such as were always present in every case, as necessary to determine actually what the matter was. And now sir, permit me to throw out the hint, that no case of Murrain ever happened without the animal suffering from what the farmers in New York used to term *baked in the manifold*, and I have dissected and attended the dissection of a number which died not only of what is called Bloody Murrain, but Dry Murrain, and without an exception has this been the case, and others who have at my instance, dissected for the same purpose have all found the same fact existing. I have in such dissections found the liver unhealthy, and have found it in a perfectly healthy state—have sometimes found, though rare, what some term *Leeches in the liver;* but have found this "Baking of the Manifolds," the only never failing attendant upon the disease. If farmers seeing this, will follow up the hint thrown out, and should come to the same conclusion, we may probably have a clue to the correct pathology of the disease; and as a consequence may direct our remedies with much greater prospect of success. If I am wrong I wish to be convinced, and that from actual demonstration, and not from superstition.

In haste, yours,

JUSTUS H. VINCENT, M. D.

Chagrin Falls, Cuyahoga Co. Ohio, June 24, 1839.

Beautiful Specimens of Wheat.

Gen. Harmon will please accept our thanks for the splendid specimens of Wheat, which accompanied the annexed note. They afford abundant evidence of the fertility of his fields, as well as the productiveness of the wheat crop the present season.

MR. TUCKER—Enclosed are four samples of Wheat heads, taken from four different fields. Nos. 1 and 2, are Flint, No. 3, Indiana, No. 4, White Virginia, (the seed from Virginia.) The Grain worm has made its appearance. You will find some in the Indiana, and some in the Flint—most in the first. I have found as many as five worms in one head. The riper it is, the more I find, except in the Virginia—I have not found any in that. The Wheat harvest will commence the last of next week, 26th or 27th inst.

Yours in haste, LAWSON HARMON.

Wheatland, July 17th, 1839.

BEEF! BEEF!

MR. TUCKER—I think the firmest believer in the doctrine of human perfectibility would have his faith severely tried, should he read our city news papers, (those of Boston, New York, Philadelphia, and Baltimore,) and notice the sage remarks, and wise reasonings, entered into, to prove that a combination is existing from the farmer, the grower of the calf, down to the butchers boy that distributes the latest steak, to defraud Mr. President Van Buren's liege subjects in their daily modicum of beef. Consumers in these places wax valorous, and talk loud; the farmer, the drover, and the grazier are denounced, and a thousand beautiful projects are proposed to be revenged on these incorrogible sinners who are plotting as is supposed, to diminish the *quantum sufficit* of beef. Now we farmers who are the fountain head of supply, and who at a glance can detect the causes that operate to create higher prices on any given article of food, are aware that none of these sage conjectures are worth a tobacco stopper, still it may benefit some to have the actual causes pointed out, that the blame of a scarcety of meat, if it exists, may fall where it ought.

In the *first place*, the number of cattle in this country fit for feeding has greatly diminished. The statistics for showing this are somewhat limited, but every one conversant with the country and the agricultural interests knows that such is the fact. The tax list of the State of Vermont one of the best grazing states will illustrate this falling off in neat cattle most clearly. I take from 1832 to 1837, five years.

Falling off in yokes of oxen,	13,000
" " " number of cows,	13,000
" " " two years old,	15,000

Making a decrease of 64,000 head of cattle in five years in that state alone; and there can be little doubt, that throughout the north the decrease was in about the same ratio.

Two causes have contributed to produce this decline in the numbers of cattle for several years past; one was the general substitution of the horse for the ox on the farm for labor—a most impolitic exchange in most cases;—and the other was the increase of sheep, which animal to a great extent took the place of neat cattle. Thus, in Vermont, during the five years in which the cattle declined above 60,000, the sheep increased more than a million, and the result was unquestionably very similar in the other northern states.

In the *second place*, the price of cattle was so high the past year for other purposes, that with the prices of grain and articles used for feeding, there was no inducement in the price of beef, high as it was, for the farmer to feed cattle. When a good yoke of working cattle is worth from 100 to 150 dollars; when a cow for the dairy is worth 35 or 40 dollars; when corn is worth a dollar, potatoes fifty cents, and other things in proportion, there is little to induce the farmer to encounter the trouble and risk of converting them into beef, as it is very rare that in such cases he obtains remunerating prices, and farmers, no more than other men, love to labor without the prospect of some small reward.

And in the *third place*, where cattle to fat were to be found, last fall and winter the materials for feeding them were not to be had. The unprecedented drouth of last summer destroyed all the means of fattening, and almost of wintering, the cattle, through a large part of the United States. Thus in the Sciota Valley in Ohio, where from ten to fifteen thousand head, are usually fed for market, the farmers were unable to furnish more than three or four thousand in the whole; and I know of towns and districts which have heretofore fed extensively from which not an ox fatted for market was driven. These three causes, and that they exist to the extent stated no one acquainted with facts can deny, are sufficient to account for any existing scarcity of beef without any combinations, or unfair dealing of any kind in any quarter.

But the methods proposed to punish the farmer, by these sapient cits, is deserving a moments consideration. They would not eat beef, that they would not. Well something must be eaten that's certain, and if you won't buy our beef what will you eat. Why, Pork and Mutton. Very well, gentlemen consumers, we can accomodate you; we have plenty of pork and mutton, but those have cost money, and must be paid for; we will eat our beef, sell you our pork and mutton; keep our cows, and in the increased consumption of dairy products, clear from each cow a large part of what she would have brought in the city market as beef. This will be the result of punishing the farmer. When hungry stomachs and lank limbs, are pitted against clover fields, fat oxen, and burdened granaries, there is no great difficulty in determining which must knock under. The farmer cannot be *compelled* to feed beef or mutton, if his interest prompts it will be done, not without; and threats or scolding will not yield a single pound of beef. If the consumer does not like our prices, let him leave the *pave*, become a denizen of the country, and assist by active labor in producing more food, to reduce them. I for one would hail such a result as a sympton of returning sanity to many, and would most cordially welcome them to the field.

PLOUGH POINT.

Proper Management of Farm-Yard Manure.

By Mr. John Pearson, Gardener and Planter to W. D. Childe, Esq., Kinlet, near Bewdley, Worcestershire.

As it is the fashion of the day to decry long established rules and customs before new systems are perfectly modelled, I may safely declare that it is almost impossible to conceive a more improper rescetpacle for manure to retain its essential properties than the generality of farm-yards. Let any reflecting man look into one of these folding yards during a heavy rain in winter, and he will soon observe the drip from all the roofs of the houses collected in a deep pool among the manure.—The manure thus lies macerating for several months; but the farmers say that the manure water runs on to the meadow; yet I can assure them that grass roots take up liquid manure but slowly, and the quick succession of heavy rain at that season of the year does not permit the retention of one-fiftieth part of what the dung has been deprived of. But the next deprivation of essential matter that that manure generally undergoes is worse than this, which is by throwing it up into heaps to rot, but to burn would be a more proper expression. Manure getting both washed and burned, it is not surprising that it is deprived of three-fifths of its original properties. I well recollect, when a lad, of being employed to drag down one of those rotting heaps at the risk of burning my feet, as well as receiving a lasting injury to my lumbar vertebræ. Several years ago I was finding fault with an experienced agriculturist for throwing his manure too thick together, when his answer was, that he always gave his men an extra jug of cider to throw it as high as the barn if they could. I asked, don't you find the middle of the heap as white as your shirt? Yes, said he, but I never could tell how it was; and added, that it was so dry sometimes that the wind blew it out of the carts. I advised him to save his extra jug of cider and lay up the manure only from two to three feet in thickness, and not allow a foot to be set on it; but I must not anticipate my remarks. I think I have made out a sufficient case of condemnation against the present system of managing farm-yard manure; and any farmer that will condescend to try the following plan but once, will assuredly abandon his old practice. The plan is simply this: let all superabundant water be kept from the manure during the time it lies in the fold-yard. This is easily accomplished by having the barns, sheds, &c. provided with spouts to convey the water into drains or into tanks for use. The fold-yards thus rendered comparatively dry, the small quantity of manure water that would drain from the dung would easily be contained in poreless tanks, and applied to the meadow at a time when the grasses were growing, and the ground dry, both of which would take up the manure before the rains came to wash it into the brooks. When the manure is put into rotting heaps, never allow them to be more than from two to three feet in thicknes, accordinng to the goodness. What is a safe guide in this process is, to have a few sticks stuck into the heaps, and as soon as they feel warm to the hand, let the manure be turned and laid a little thinner; and should they get hot a second time, turn the manure again. This, in most cases, will be found sufficient, provided the dung and straw have been well mixed during the process of turning; and, in the course of a month or five weeks, the manure will be sufficiently rotten for every agricultural purpose, and retain nearly if not all its original properties; and what is also of consequence to the farmer, it does not take quite so much labor as the old plan of throwing it as high as the barn.—*London Farmer's Magazine.*

Use of Sulphur in preserving Plants from Insects.

The Domestic Encyclopædia directs, to tie up some sulphur in a piece of muslin or fine linen, and with this dust the leaves of young shoots of plants; or the sulphur may be thrown upon them by means of a common swan's-down puff, or even a dredging box. No insects or worms will prey upon vegetables which are thus protected. Sulphur has also been found to promote the health of plants on which it is sprinkled.

In support of the recommendation, we state two cases wherein we have found the benefit of sulphur, one in protecting plants against insects, and the other in protecting them against mildew. Dusted upon grapes, in the grape house, they have prevented mildew upon the fruit. It is equally efficacious in the open ground, till the sulphur is washed or blown off. For many years, we have lost most of our early cabbages by a maggot which preyed upon the stem under ground.—By mixing sulphur with the grout in which the roots of the plants are dipped before planting, the evil has been wholly prevented; and if the plants are plunged deep in the grout, so as to coat the base of the leaf stems, they are protected from the grub. If scattered upon the rows of young cabbages and radishes, before or after they are up, it would probably be efficacious in protecting both the tops and bottoms.—*Cultivator.*

From the London Farmer's Magazine.

Culture of Wheat in England.

The varieties of wheat are numerous, differing not a great deal in quantity or quality of produce, admitting of the same mode of cultivation, and used by farmers as much from caprice and fashion, as from any incontestible grounds of superiority. It has been satisfactorily settled, however, that the white wheats are finer in quality than the red, the other primary distinction of the genus, and that they are more adapted for good lands and early climates. A variety of the red, called creeping wheat, is much used on poor soils and in late latitudes, and in Scotland and in the North of England; spring varieties are much esteemed both of red and white, and which are evidently derived from winter wheats by late sowing, and by persisting in using the produce of that sowing. Of late years, much has been said and written about some new varieties, which had proved much superior to those already known, both in quantity and quality of produce. Nature has fixed a limit in soil and climate, beyond which production cannot advance, and a limit seems also fixed to human exertions in endeavoring to reach the utmost power of production. A plant may be forced to an uncommon increase on an artificial hot-bed, or by some casual circumstances—but how is this hot-bed to be generally procured? Plants raised by such means, when submitted to the test of the ordinary and available means of cultivation, will become acclimated, and range themselves under the standard of production allowed by soil and climate. A repetition of this test alone can determine the usefulness of such introductions. A great quantity of any article with a corresponding quality, seems in a great degree incompatible; an over production may be forced by artificial means, even to a great loss, and it seems a fixed law in the animal and vegetable world that bulk does not carry with it a proportionate quality. Quantity and quality together, form the excellence of any article, and though the latter be ever desirable, yet the difference must be very great before it can supply the loss of quantity for common use. If, with our known and available means of cultivation, we can produce equal quantity with a superior quality, a great improvement is effected, if we raise a less quantity but of a better quality, it remains for that quality to make up for the loss of quantity; and if we can, with the same or additional means, produce both greater quantity and quality, or a greater quantity with equal quality, we will have made a great step in advancing to the limit of production from which we are yet very far distant. Such results can be gained only by long and laborious investigations and experience, in our present day and circumstances. Quantity seems the chief object, and to attain this point, it would appear the more judicious method of proceeding to try to increase the quantity with the same quality, by raising a greater number of articles rather than force a few to an overgrown state; for a plant or any other article raised by forced means, is not so useful or beneficial as if the means had been applied to a greater number. A great variety of different circumstances concur in ruling all such applications, and in the present case of new plants can be determined only by time and experience.

In our present systems of cropping, wheat is sown in autumn on a well prepared summer fallow, and on a clover ley, bean or pea stubbles, and on land from which green crops have been removed or eaten on the ground during winter, and the spring varieties are sown till the end of March. One ploughing is in all these cases sufficient, with three or four times of harrowing. Sowing by broad-cast or by drilling, is practised according to the nature of the soil and other circumstances, stiff clays prohibiting the use of the drill, while drier loams admit of its full benefit. The manure is generally applied to clay fallows during the latter part of summer, and the land is seed furrowed and sown in October with all possible dispatch. It is preferable to sow close up to the ploughs, at night, the land ploughed during the day, or during that and the previous day, and even to water furrow the same and to finish as far as possible the process; for such is the precarious nature of these soils, that every advantage must be seized, and if a season be once lost, it can never be regained that year. The double mould board plough makes the neatest work in water furrowing, but in wet seasons, the resistance is too great, and the common plough is used, and passes once or twice along the furrow. The headlands being ploughed, sown, and harrowed, and the common plough having passed along the outside furrows next the ditches, and also along the inside furrows of the headlands, and the cross cuts being also drawn with one or more furrows to facilitate the cleaning by the spade, that no water be allowed to stand during winter, the whole process is finished. Much attention is required in drawing and deepening these cuts especially on uneven surfaces; in such situations, time and labor are requisite to lay the land dry by every means, however awkward or circuitous; in other cases, little more is necessary than to observe that no obstruction remains in the water-furrows, and to provide a sufficient outlet for it at the end of the field. The same mode of proceeding is followed in sowing on bean and pea stubble, tare grattans, and on clover leys, where wetness prevails, to sow, harrow, water-furrow, cut, and finish with all possible dispatch, to lay the land ready for the changes of that precarious period of the year in our variable climate. On the dry loams of our eastern counties, little more is required than to plough and sow; a harrowing precedes, and follows the operations of the drill; and there is not in our island a more beautiful specimen of farming to be seen than the drilled wheats in Norfolk, the rows as straight as a line, and not one stray pickle. But the soil and climate are particularly favorable for that operation; in other cases, drilling both by machine and by "ribbing" with small ploughs has been discontinued for several reasons. In that application, as in every other, circumstances must direct.

Wheat lands are seeded with from 2½ to 4 bushels per acre, and it should be selected from the best and cleanest grain to be found. Much exertion is at present being made by distinguished individuals, to improve our varieties of wheats by cultivation and classification; but great advantages may be in the meantime derived by the farmers picking the sheaves of the crop intended for seed, and above all, by cleaning it entirely from the seeds of weeds. Good crops have been obtained by using inferior grain for seed, but we may suppose that the inferiority had not been confirmed by long standing, and that upon meeting with a favorable soil from cultivation, the primitive qualities had returned.

In the proceedings of nature during the many varied processes of production, and of re-production from natural and artificial cultivation, there is much of an intricate and of an inscrutable nature, both in the animal and vegetable world, but isolated cases cannot furnish a general rule, and we must adhere to what time and experience has settled and confirmed. It is generally understood and recommended that all the Cereal crops be cut before dead ripeness; not so soon as to shrivel the grain, but to allow it to harden after it is cut, instead of acquiring that quality when standing. I am satisfied, from experience, that in the case of wheat, the quality is much finer, and several millers certified the fact; the time of cutting must be chosen when the grain is fully formed, and has acquired so much consistency as not to shrink but harden when cut. Wheat is usually ripe in August, and is cut with sickles, and tied into sheaves, with bands made of a quantity of itself, twisted together by a knot, and set up to dry in shocks of twelve sheaves each; in wet climates two sheaves are laid on as hoods, and assist in keeping dry the inside sheaves. When dry enough for keeping, the crop is carried to the stack-yard, and built in square or round stacks, and threshed during winter, as convenience requires; by flails it costs 3s. to 4s. per qr.—by horse-machinery from 1s. to 1s. 6d., and by wind, water, or by steam, from 6d. to 10d. Being passed twice through a fanning machine, or once if the crop be clean, and chaffed by machinery, and then measured up into bags of two or four bushels each, it is ready for delivery in the market. Wheat is a scourging crop, and consequently an expensive one; on a summer fallow, and exclusive of rent and taxes it will cost, at an average, from £8 to £10, per acre, according to the price of manure and local distances; the expence of fallowing and manuring should not be wholly charged to the first crop—one-half would be a fair mode, and the other half apportioned in a decreasing ratio among the other crops of the rotation. Much of the prejudice against green crops has arisen from this original expence, which may be very easily removed by the simple consideration of whether the subsequent crops could be so productive without that crop as a preparatory process? The answer is obvious; but such a belief remains in spite of experience, and acts very prejudicially.

In our island, wheat is subject to the diseases called "black brand," (*ustilago frumenti*) to yellow ochre, rust or mildew, and to "black ball or smut." The first mentioned is not much known, and it is yet uncertain if the rust or mildew proceeds from the roots or from the atmosphere. I was personal witness to a fine crop in Northumberland being affected near the hedges, and in a zig-zag direction over the field, while the other parts remained unhurt. In this disease the partial calyxes are occupied with the yellow substance which seems to detract the support intended to mature the grain, and the pickles become shrunk and shrivelled. It was long thought that the Barberry plant communicated a similar disease to wheat, but it appears where no Barberry was ever known. In certain seasons and situations a kind of flies have of late years inflicted a partial injury on the wheat crops, by occupying as a nest for its larvæ the bed of the pickle, these injuries evidently resulting from the peculiarities of the seasons; it never may be possible for human power to find any preventive.—Luckily the ravages are not extensive. The black brand and black ball or smut, are very different, but have been often confounded by scientific men. The last mentioned is the most fatal, and is much more constant, and not so much dependent on seasons and other circumstances as in the first-named. It is more prevalent, however, in some seasons, and on certain soils than in others, and in a wet climate more than in a dry. In the black brand the pickle is converted into a dry black powder, as if it had been roasted, and the culm is affected in all its parts. In black ball or smut the pickle is converted into a round globule, with a thin black, greenish, and often transparent covering, and filled with a damp, brownish, fœtid powder. The black brand powder flies off without communicating any noxious quality from adhesion, but the smut powder sticks to sound corn, and when broken communicates an odour easily discovered by our millers, and consequently diminishes the value of the grain. Like many other appearances in the natural world, it has greatly disappeared before improved cultivation, and a disease thus diminishing the crop in quantity from the affected grain, and also from spoiling the sound part by its contact, would naturally be much observed, and a cure of a preventive be eagerly sought.—No appearance in the vegetable world has more completely baffled the investigations of science than this one of the smut, for we find sound and diseased ears on stalks proceeding from the same root, and smutted and sound grains on the same ear. In the case of black brand we see the ear "wholly" converted into powder, and the stalk and leaves affected and shrivelled, and different from others. This appearance seems comprehensible by our limited understandings, to see a plant wholly destroyed, but it seems inconceivable by any process of human reasoning how some parts of a plant can be spoiled and others perfectly sound from an affection proceeding from the root, or from the atmosphere, no cause of affection being visible as in the case of flies, depositing from their larvæ. Sound grain has been carefully infected with smut powder, and has produced the same phenomenon—sound and spoiled grain on the same ear, and growing from the same root. If the affection proceeds from the root, it is natural to expect the whole stalk or stalks that proceed from a diseased or infected pickle would be spoiled, from the food being vitiated, if it proceeds from atmospheric causes, it is alike incomprehensible how some pickles are diseased and others not. Experience has most certainly established the fact that corrosives are a great preventive; but we are alike ignorant of the manner in which they act, in not preventing the disease from the same root, and how the preventive quality is conveyed from the root by the stalk to the ear, and how it preserves some pickles and not those adjoining on the same ear. Every thing that has been broached in trying to investigate the nature and causes of this disease has failed, and we must content ourselves with what time and observation has furnished to us. Mr. Somerville advanced a very plausible theory, that insects took possession of the calyx, and caused the putrid decomposition; but experiment completely overturned it, and I have myself repeatedly fired the balls by means of a concave lens, but never could discover with a microscope the very smallest appearance of the animalculæ he described as resembling wood-lice in shape. The ball consumed slowly, and emitted a very fœtid odor. The opinions of Jussieu, Bauer, and Davy are alike inconclusive; if they were proved to be correct, they all leave untouched the incomprehensiblity of sound and smutty grain being found from the same root and on the same ear.

Tull has related that the use of salt brine as a steep was discovered by the sowing of wheat that had been sunk in a ship near Bristol, which escaped smut when nearly all the wheat in England was infected. From this circumstance an inference would be drawn of the use of other corrosives; and accordingly we find many used, one of the more efficacious of which is, stale urine unmixed, in which the grain is immersed, and then encrusted with quick lime, and sown immediately. In our southern counties little or no preparation is necessary; but in wet climates smut will prevail, notwithstanding every caution, and a frequent change of seed from more favored countries is absolutely necessary. The means already known, if not a perfect cure, will yet, if properly used, prevent the disease from materially affecting the value of the crop.

Whitewash

Is one of the finest things in the world to promote health and cleanliness. It also covers up a multitude of dirt, as a cloak conceals the rents in an old garment. Some farm houses look black and unsightly, while the crevices in the wood admit the rain. Perhaps they are not worth painting—but a coat of whitewash, which costs but a few hours of labor, with water and lime does the work. They look fresh and clean, and during a year the wash is soiled but little. We commend a coat of this to every man who has an unpainted house, both on the score of beauty and taste, as well as for cleanliness and the preservation of his building.—*Northampton Courier.*

Agricultural Legislation.

The following extract from a production of Mr. Gordon of Clinton College, Tennessee, expresses our own sentiments exactly. If they could be so impressed upon the farmers of the country as to induce them to act in the obvious and sensible manner indicated, great would be the blessings which would result to a glorious but much abused land. Indomitable energy would be imparted to the productive industry and millions added to the solid wealth of the country; while the education and morals of the people would be established on a broad and permanent basis. But these subjects, though of prime importance, are every year made to give place to the infernal schemes of the never-tiring party politicians; and the farmers themselves are chiefly relied upon to sanction their projects and indeed made instrumental in executing them, for without their aid, the prettiest piece of political humbuggery ever conceived by demagogues, could not command a moment's notice a day after the first election following its annonncement. When will the farmer's learn to respect their own rights and maintain the dignity of their own class? They are the most credulous, the most confiding, the easiest humbugged, of any class in the community, and consequently they are the most abused. Orders from head quarters of a party (this or that) are issued, purporting that on the defence of this or the explosion of that political dogma, the salvation of the country solely rests; and forthwith a mania seizes the farmers, they suddenly become profound statesmen, and labor like Hercules *till the election is over*, when they find themselves duly humbugged, their importanee underrated, *their interests wholly forgotten*, and nothing accomplished save the sacrifice of their own interests and dignity to the base ambition of some vulgar demagogue, likely to be annihilated at the next election. Such, brothers, is not an overdrawn picture of things annually occurring by your own agency. How do you like the picture, and how long shall a stereotype plate serve to multiply faithful copies of it? We can answer for you—just so long as you lend your political support to partizan politicians whom you will not require and cannot force to legislate for the obvious interest of your country; and so long as party politicians have any personal objects to secure for themselves. Would you be pleased to look on a brighter, happier picture? Then yourselves must sketch it. And *we* should be infinitely rejoiced—our eyes would delight to see the fresh outline, boldly limned by the master hand of the people—aye, done in *a month* from this time. The *canvass* is already prepared and it only needs the brush of the farmers to lay on the genuine colors. But we are forgetting our excellent extract.

Says Mr. Gordon:—"It appears to me that our politicians, both of the Union and the States, have always been legislating at the wrong end of affairs. If the States would adopt a course of legislation that would bring all the talents in them to bear on their soils, wealth would soon be so abundant that roads, colleges and banks would be made wherever they are needed. Nature made our country principally for Agriculture, and the neglect of it throws every thing else into confusion and distress, It is high time for us to rise and assert our rights. Let us vote down at the ballot box every puffed politician, who would lead us away from our main interest by filling our heads exclusively with Van Burenism, Clayism, Websterism, Harrisonism, Jacksonism, or any other ism. Let us make them speak out and act for the interest of our country, or leave them at home, and select other law-givers who will study this vital blood of our country. It is in vain to disguise any longer; to this point we *must* come at last." And we may add—the sooner we come to this point, the better; and unless we *do come* to it, the prosperity, happiness, morals and liberties of the country will soon come to a period, for these cannot long be maintained while agriculture, the basis of civilization and the support of the social system, the mother and patron of the sister arts, and the vital energy and national independence, is unprotected and debased by government and its followers made the instruments of its own depression.—*Franklin Farmer.*

From the New Englaud Farmer.

Farm Accounts.

How often do we hear it said that "Massachusetts farmers cannot get a living"—but a few days since I heard a farmer remark that "no one could expect by farming to receive more than four per cent. for their capital invested," These things have been so frequently reiterated that our young men feel that they are under the necessity of seeking other employments or remove to the west, where it is represented that labor receives a greater return. I am aware that much may be done to increase the income of the farmer, and trust that light is dawning and that a new impulse has been given which ere long will convince our young men that agriculture in Massachusetts is not only honorable but profitable. It has appeared to me strange that farmers generally neglect to keep correct accounts in reference to their farms; probably owing to this many have been deceived; their farms not having the credit for all they produce. In your paper of last week, Mr. Anthony has given an account from which something may be learned. It has been my practice to keep an *exact* account, charging every thing and giving credit for every thing belonging to the farm. In order that I may be corrected if in an error, I shall *suppose a case*, and give you the account as I keep my own.

Suppose my family consist of ten children, and one of the number, by sickness or some other calamity, is a constant bill of expense, and suppose my neighbor is not blessed with children, and we have farms nearly alike and managed nearly in the same way—our expenses will not be the same, and unless a proper account is kept, I may be led to complain of the unprofitable business of farming. The following acconnt is on the supposition that I am "clear of the world" and my all is in my farm and stock. I estimate my stock and tools, &c., at prices they would command, being careful not to deceive myself on this point—considering that for my own use they are worth more than estimated at; also intending to improve my farm and make it more valuable.

1838, April 1. Farm Dr.

Cost of Farm,	$3000
Manure on hand,	150
Stock,	400
Produce,	200
Tools,	250
Dairy utensils,	50
	$4050
Purchased during the year stock and tools,	200
Sundry expenses,	42
Paid for labor,	40
Board,	17
Labor of self and two sons including board,	575
Labor in dairy,	75
Paid taxes,	15
Insurance,	5
Interest on $4050,	243
	$5262
Balance profit,	400
	$5662

Cr.

By hay and grain sold,	$196
Butter cheese, veal, and milk,	394
Pork and beef,	450
Wood for family above what was used for dairy, &c.	45
Grain, butter, milk, &c. &c. for family,	195
Rent of house, and use of horse,	75
1839—March 31—On hand	400
Produce,	350
Manure,	250
Tools,	262
Dairy utensils,	45
Farm,	3000
	$5662

And now let us suppose my farm sold and the account closed, and the result as above. I have to support my family—

Received for board,	$17
Labor and do.	650
Interest,	243
Profit,	400
	$1310

Now my expenses, arising from a numerous family, sickness, the education of a son, &c. may have been $1600. if so, should it be said that farming is not profitable? It appears that I am paid for my labor and receive more than 15 per cent. interest for the capital employed.

I have made this statement, believing that farmers often are deceived, and that a multitude of farmers in Massachusetts can show a better result than is exhibited by this account. T.

Westboro', June 1839.

Lime for Potatoes.

The use of plaster (sulphate of lime) for potatoes is well known to every farmer. A spoonful or two put into the hill or upon the tops when they have come up, causes an essential increase.

It is not generally known, however, that common lime, slacked until it falls to a powder, and put into the hill, is also a valuable dressing.

Mr. Hamlin, of Augusta, North Parish, informs us that he last year used lime in this manner, and that he thought it was much preferable to plaster.

Its effects were not so quick, but at the harvest it was apparent from the increase of the crop, that the lime was the best dressing.

Since then, we find stated in some of our exchange papears, that Mr. John Ide, of Waterford, Vermont, has applied lime in the same way, putting about a pint in the hill. Whether this is better than applying it after the potatoes are up, or whether its good effects will be apparent when applied in this latter mode, we have not been informed. If these facts should tend to further experiments, and it should turn out that lime is in all cases a valuable manure for potatoes, here is another use for this article, with which our state is so well provided.

Lime and potatoes are becoming one of the staple productions of Maine.—*Maine Farmer.*

Spanish Oxen---Working Cows.

A gentleman temporarily resident in the Havana, who is a very competent judge, states, that the oxen in that country are of a superior character. They draw entirely by the horns, and are, properly speaking, not driven but led by a boy, who precedes them, holding a rope fastened to a ring, which is passed through the cartillage of the nose; and they are trained to walk with as much speed as horses.

Every one who has seen an ox trot or run, must be satisfied that they were never formed for racers. Yet undoubtedly they might be trained, and with advantage, to move much faster than at their ordinary gait among us, which is proverbially slow. It is worth considering whether the habits of thought and action among a rural population bear any correspondence to the habits of the domestic animals with whom they associate; and whether the habits of people accustomed to the quick movement of horses in working and riding, are not more active, spirited, and enterprising than of a people accustomed only to the slow movements of oxen, who as they are often trained and driven, do little more than creep.

It would seem to be time to get over the absurd prejudice which prevails among us, against workiing cows. On small farms especially, where the expense of keeping an ox team is always heavy, it would be a great gain to use them in this way. In many parts of Europe they are so used, and certainly may be so used with as much propriety as we use mares; who, with the exception of certain seasons, are as useful as horses—indeed more active and spirited and quite as enduring.—In respect to cows, all that would be required would be extraordinary care and kindness when far advanced with calf, and entire release from work for a short time before and after calving. The extraordinary feed which we could then afford to give them, would enable us to get almost as much milk from them as we now get.—We wish some intelligent and respectable farmer would make a fair experiment in this matter. But with existing prejudices, which we know it would be very difficult to overcome, a man would almost as soon be seen driving a team of women in harness as a team of cows. We must beg pardon for the homely analogy or for even so much as hinting the possibility of, not to say the want of gallantry in the thought of driving women in or out of harness. It may sometimes be possible to lead them after the Havana fashion, with a silken cord. We presume to hazard no advice on the subject however.

New England Farmer. H. C.

Cheap Manuring.

Many farmers in this State of late years have adopted the practice of manuring their land for wheat the ensuing season, by turning in green crops. For instance, take a field when the grass upon it is about fully grown, say the first of July, and turn it nicely over with the plough. Then harrow and sow with buckwheat. In four or five weeks, that is by the middle of August, this crop will have attained its growth. Turn this under with the plough, as you did the grass before. These two green crops thus ploughed under, bring to the soil much manure from the green haulm acquired from the atmosphere. They create an active fermentation, make the soil light and pliable, and manure it more than if the same had been cut in the form of hay and fodder and given to horses and cattle in the barn. It is on the whole an excellent mode of enriching soils, which will ordinarily produce good wheat the next season.—*Maine Cultivator.*

Curing Hams.

I beg leave to present to the public my manner of preserving hams. I turn my barrel over a pan, or kettle, in which I burn hard wood for seven or eight days; keeping a little water on the head of the barrel, to prevent it from drying. I then pack two hundred weight of ham in my barrel, and prepare a pickle, by putting six gallons of water in a boiler, with twelve pounds of salt, twelve ounces of salt-petre, and two quarts of molasses. This I stir sufficiently to dissolve the salt, &c., and let it boil and skim it. I then let it cool and pour it on my ham, and in one week I have smoked ham, very tender, of an excellent flavor and well smoked. When the weather becomes warm, there will a scum rise on the pickle. By keeping my ham under pickle, it will keep the year round.

It is better to have a good white oak barrel than any other. Try it, and if you ever had meat smoked earlier after killing, and more palatable, please inform the public through the columns of your paper. Yours, &c.

Hanover, Mich. March 7, 1839. H. Fowler.

Go slowly to the entertainments of thy friends, but quickly to their misfortunes.

Liquid Manure.

This species of manure is so valuable and so universally neglected, that a few observations, independent of what has been previously said, may tend to call the attention of agriculturists to an article of immense importance, which at present seems either entirely to have escaped their observation, or to have been deemed beneath their notice.

It should be always kept in view, that beyond the increase of size and weight which takes place in a living animal, the quantity of food supplied will pass from the animal in some form or other, either in secretions such as milk, urine, &c., or in excretions from the bowels.—Beyond, therefore, what is expended in adding to the weight of the animal fed, the manure, either in a solid or liquid form, should be equal to the quality of food supplied. The solid manure or dung is the refuse of the food taken in by the animal after it has undergone the digestive process in the stomach, its nutritive particles being extracted, and taken into the animal system to supply the waste constantly going on, as well as to add to the weight or size of the animal. The urine again is the refuse of matter which has been absolute particles of the animal, and may, therefore be strictly considered animal matter; it contains within itself a far greater proportion of the fertilizing qualities that constitute the essential principle of manure, than what is contained in the same quantity of excrementitious matter or dung; but the fertilizing properties of urine are very trifling in the green or fresh state to what they are in the same liquid when it has undergone a thorough fermentation, and been thereby reduced to a high state of putridity. Whilst undergoing this process, it may be made available as a menstruum to convert vegetable or animal matter into the richest manure. The quantity of urine made by a moderate sized horned beast, when full grown, in the course of 24 hours, will be found something about 32 pounds, as has been before observed; but generally speaking the quantity if the beast be well fed with good food, will be much greater; even, however, according to that estimate, the quantity as well as the quality is of the greatest importance, and has a claim to the best attention of every one concerned in agriculture, or in the keeping of any kind of live stock.

The estimate generally made is, that one-third only of the food taken in by a neat animal is parted with as excrementitious matter or solid dung; two-thirds therefore, according to that estimate, must pass through the animal in a fluid form. Whatever food is taken in before it can be made available for animal sustentation, must be converted into a fluid state only can anything be made available to renovate those parts of the animal system which in the performance of their functions, are undergoing constant waste, as well as to supply those demands which the various secretions constantly going on, are without interruption making upon the system. The following experiments detailed in the 1st vol. of *British Husbandry*, p. 255, are pertinent to the subject.

"On the 28th March, 1833, an experiment was made with a large sized Yorkshire cow, which was fed during four and twenty hours with the following provender:—81 lbs. brewer's grains, 30 lbs. raw potatoes, and 15 lbs. meadow hay.

The food thus amounted to 126 lbs. She drank two pails full of water, and the urine was allowed to run off; but she had no straw or litter of any kind, and the weight of the solid dung which was carefully swept up, amounted to 45 lbs.

Another experiment was made with the same cow a week afterwards, but with a change of food, which was contined during some days, on the last of which she consumed within the 24 hours, the following quantity: 170 lbs. raw potatoes, and 28 lbs. of hay.

As in the former experiment no litter was allowed, and the urine was let off, but the solid dung amounted to 73 lbs.

Although not incidental to the subject in question, it may, however, be worthy of remark, that although the cow was in perfect health, yet on this latter food her milk actually fell off at the rate of very nearly two quarts a day.

These experiments, though to a certain extent valuable, as showing the quantity of excrementitious matter in relation to the food consumed, are yet far from being satisfactory, as the exact quantity of water drank, is not set forth with precision in one case, and not at all in the other. The individual in making the experiments did not seem to consider that the drink to a certain extent, was as necessary to sustentation as the other food, and ought decidedly before such experiments would have been satisfactory, to have been set forth with precision. However, as they are, the quantity of solid dung in proportion to the food consumed is pretty clearly shown, when the fluid taken by the animal has been brought into account, to be under-estimated when put down as one to two.—*Roberts' Hints on Agricultural Economy.*

Chinese Tree Corn.

There is certainly something mysterious about the Chinese Tree corn, which we should really be glad to see explained by those who are competent to make the explanation.

According to Thorburn's account of it, a year ago last spring he had but a very few kernels found in a tea chest from China. These he planted, and last year planted the avails, from which the seed was produced that he has advertised and sold this year. It would seem as if there could not have been much planted, or raised the last season. Indeed he publicly has stated that he hoed it himself on mornings before sunrise and in evenings after sunset. The plantation then could not have been large. The quantity of seed, then, raised, could not have been great. Last December or January the Editor sent to him in New York for eighteen ears; it was sent, but came with the word that the supply was then about all gone. Shortly after, a neighbor of ours also sent to New York for some, and could not get any for the reason that it was all gone. Thus matters stood till spring, when the Boston Seed Establishments advertised it for sale at a great rate. According to the Yankee Farmer there cannot have been less than fifty thousand ears of the Chinese Tree corn sold in New England the last Spring; and they all say they bought it of Thorburn himself. Supposing that it was distributed amongst the Middle States as extensively as in New England, the Farmer makes out that, according to Thorburn's account of its "prolific" bearing, there could not have been less than fifteen acres of it raised last year—quite too large a patch, one would think, for Thorburn to hoe before sunrise and after sunset.—There is deception in *this* matter somewhere; we should like to know who is the author of it. If Thorburn himself has deceived the public, he will never recover his forfeited reputation. He should be lashed by the tribe editorial to the end of the earth, and there pushed off. Our remarks, however, now only relate to deception as to the quantity raised last year; whether there is deception as to the earliness and productiveness of the corn, remains to be seen. We hope his promise in these respects will prove true.—*Maine Cultivator.*

English Turneps among Corn.

We believe it is a good plan to scatter a few seeds among corn at the second hoeing, which is generally the first part of July—particularly in the vacant spots, such as missing hills &c. There is time enough for them to mature; and as corn attains its growth and ripens before the turneps get large enough to shade the ground, the latter will prove little or no injury to the corn. A good husbandman taxes every inch of his land that is under cultivation. He suffers no spots to lie barren. In every corn field there will be vacant places, not much if any occupied by the corn; and we repeat, it is good economy to scatter a few turnep seeds upon such places, if not in other parts of the field, early in July. A single turnep as large as a quart measure, to each hill of corn throughout the field, coming on its growth late, could not essentially affect the corn crop, and these, at this rate, would amount to more than 80 bushels to the acre—quite an object.—*Maine Cult.*

Superior Grindstones,

AND warranted. They are from the celebrated quarry at Berea, Ohio. If they do not answer the expectations of the purchaser, they may be returned and the money refunded. Be particular to enquire for "*Berea Grindstones.*" For sale wholesale and retail.

D. M. VANDERPONL,
No. 17, Webster's Buildings, Main street.
Buffalo, N. Y. July 20, 1839.–w3t.

Saxony Ewes.

THE Subscribers will let for a term of years to responsible farmer, fifteen hundred Ewes, in lots of fifty or upwards, to be taken after weaning their lambs.

These Sheep belong to the White Springs flock, which is well known to be as fine as any in the caunutry.

Terms made known on applicatton to either of the subscribers.

ROBERT C. NICHOLAS,
Geneva, July 6, 1839.–w3m JOHN NICHOLAS.

Agricultural Warehouse and Seed Store.

79 *Barclay-street, New-York.*

AT this old established stand, the subscribers take pleasure in announcing to the public, that they have made extensive arrangements to accommodate farmers in all articles connected with husbandry, viz:—Agricultural implements, a full and fresh supply of Field and Garden Seeds, Fruit Trees, Durham Cattle, Chinese and Berkshire pigs, 10,000 Morus multicaulis Mulberry trees; Publications on Rural subjects, &c.

Published here the Rural Library, S. Fleet, editor, a few copies of 1st vol. for sale. The object of this work is to constitute a Library at the least possible expense. 2d vol., commencing with Professor Low's Elements of Practical Agriculture, with nearly 250 fine engravigns; subscription $3. Subscriptions received for the Genesee Farmer, Cultivator, &c. &c.

J. W. WEAVER & CO.
April 20-wm1y 76 Barlay-st, New-York

GRINDSTONES,

OF a Superior quality and warranted. If they do not answer the expectations of the purchaser, they may be returned and the, money refunded. For sale at the Rochester Edge Tool Manufactory, office on Front Street, a few rods north of Main Street bridge.

june 29–w3m mlt D. R. BARTON.

Great Sale of Improved Short Horn Cattle, and Blood Horses.

THE subscribers will sell at Auction, on Tuesday, the 10th day of September next, at the farm of Samuel Allen, on the Niagara river, two miles below Black Rock, the entire stock of Improved SHORT HORN CATTLE, for several years past bred on the farm of L. F. ALLEN, on Grand Island.

The herd consists of about 30, including COWS, BULLS, HEIFERS and CALVES. Several of them have been imported by one of the subscribers direct from England, and with their produce, are surpassed by few animals in the country. In addition to these, every animal offered is the direct descendant of thorough bred imported stock, and of unquestionable purity of blood.

With the above will be sold, 20 select and beautiful animals, consisting of pure DEVON; crosses of different degrees between the Devon and Improved Short Horn; crosses of the Alderney, and of the Ayrshire, with the Short Horn. These are cows, heifers and calves; all superior animals.

ALSO—The superb Horse "BELLFOUNDER," (got by Imported "Bellfounder," the best thorough bred trotting horse ever in America, and out of the imported Mare "Lady Allport," bred by T. T. Kissam, Esq. of Long Island. The stock of this horse is unsurpassed in the country for size, speed and action. Together with several elegant THOROUGH BRED BREEDING MARES, and Fillies, and two or three young horse Colts, the produce of the above. These animals are of the highest character as roadsters; and as trotters, no blood in the country has excelled them. They are all from the best stables of Long Island. Also, a beautiful pair of full bred matched Fillies, 5 years old. All these horses are blood bay.

This entire stock will be sold without reserve to the highest bidder, commencing at 10 o'clock, A. M. They can be shipped within an hour from the farm on board the steamboats to go up the lakes, or on board the canal boats at the farm. Catalogues of the animals, with descriptions and pedigrees, will be prepared, and the stock may be viewed at the farm previous to the sale.

A credit of 60 days will be given on approved notes, or acceptances, payable at a bank either in Buffalo, Albany, or New-York, for all sums over $100.

LEWIS F. ALLEN.
Black Rock, N. Y. June 25, 1839. SAMUEL ALLEN.

☞ The "Ohio Farmer" and "Lexington (Ky.) Intelligencer" will please insert the above till the first of September, and send their bills to the subscribers for payment. w&m

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public that he has for sale at his Nursery in Rochester, Monroe county state of New York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms.

April 15, 1838. SAMUEL MOULSON.

N. B. Cash will be paid for a few thousand two years old APPLE TREES.

Monroe Horticultural Garden and Nursery,

GREECE, MONROE COUNTY, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with trees and plants in different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer

April 1, 1838. ASA ROWE.

Horse Rakes.

AS some inquiry has been made through this paper relative to Horse Rakes, the subscriber would take this opportunity to say to its patrons, and all others, that he is offering to the public the latest improved Revolving Horse Rake, which can be had at the following places:

Rochester—C. Hendrix. *Auburn*—Hyell, Watrous & Co. *Elmira*—Robert Cevell, jr. & Co. *Burdett*—E. Baker & Co. *Ovid*—P. Himrod & Son. *Genoa*—H. G. Bushnell. *Waterloo*—J. L Lundy & Co. *Seneca Falls*—J. C. Chapman. *Geddes*—S. H. Mann. *Syracuse*—Wright & Wheaton. *Ithaca*—Wm. R. Collins *Lenox*—Horace Hall. *Cittenango*— —— Crouse; and many other places not here mentioned.

Those who wish to purchase, would do well to give us a call.

AMOS HOLBROOK.
Whitesboro', June 12, 1839. jun 24

Morus Multicaulis.

A FINE lot for sale; also, a few English Hawthorn of large size, a very desirable lot, by S. MOULSON,
February 27. Front-street.

Great and Timely Arrivals!

AT THE ROCHESTER SEED STORE.—The subscriber is happy to inform his friends and customers, that he has just received direct from England, a very large supply of imported Seeds, of such kinds, and in such quantities, as will meet the demands of the public, and of such quality as cannot fail to give satisfaction. Among them are,

1,500 lbs. English Purple Top Ruta Baga,
800 lbs. English and Scotch assorted Turnep,
650 lbs. Mangel Wurtzel,
300 lbs. French White and Yellow Sugar Beet,
175 lbs. Long Orange, and Altringham Carrot,
150 lbs. Yellow Dutch, and White Portugal Onion,
500 lbs. Cabbage, Cauliflower, Broccoli, and Radish,
450 lbs. White Dutch Clover, Trifolium Incarnatum.

Also—New Orchard Grass, Pacey's perennia and Italian Rye Grass, Spring Tares, Potatoe Oats, Winter Oats, many new varieties of Peas and Beans, together with a multitude of smaller articles.

Also—Nearly one hundred varieties of the choicest English FLOWER SEEDS. (These will speedily be put up in small papers, price 5 cents each, 50 cents per dozen.)

Also—Just received, a good supply of THORBURN'S CHINESE TREE CORN, and ROHAN POTATOES.

Orders already received will be immediately attended to.

All orders from a distance must contain a remittance, or good reference in this city.

☞ Agents will receive new supplies as soon as possible.

May 1, 1839. M. B. BATEHAM.

☞ *Oswego Agency.*—M. B. EDSON, Druggist, Oswego, is Agent for the Rochester Seed Store. A good assortment of Seeds may be found there.